

USSN 10/590,136  
Reply to Non-Final Office Action dated 7/20/09

Customer No. 00027683  
Atty. Dkt. No. 36689.259

1. AMENDMENTS TO THE CLAIMS (LISTING OF CLAIMS):

*This listing of claims will replace all prior versions and listings of claims in the application:*

1. (Currently Amended) An isolated polynucleotide comprising:
  - (a) an isolated HSV LAT enhancer element that consists essentially of a contiguous nucleotide sequence from about nucleotide 118,975 to about nucleotide 120,471 of SEQ ID NO:109, SEQ ID NO:110, or SEQ ID NO:111;
  - (b) a first isolated LAT insulator/boundary region that consists essentially of a contiguous nucleotide sequence from about nucleotide 8365 to about nucleotide 9273 of SEQ ID NO:109, SEQ ID NO:110, or SEQ ID NO:111, operably positioned upstream of ~~said~~the isolated LAT enhancer element ; and
  - (c) a second isolated LAT insulatory/boundary region that consists essentially of a contiguous nucleotide sequence from about nucleotide 120,208 to about nucleotide 120,940 of SEQ ID NO:109, SEQ ID NO:110, or SEQ ID NO:111, operably positioned downstream of ~~said~~the isolated LAT enhancer element.

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2-8. (Canceled)

9. (Currently Amended) The isolated polynucleotide of claim 1, further comprising: (d) at least a first promoter region operably positioned upstream of ~~said~~the LAT enhancer element, and downstream of ~~said~~the first LAT insulator/boundary region.

10. (Currently Amended) The isolated polynucleotide of claim 9, wherein ~~said~~the promoter region comprises an HSV LAP1 promoter.

11-13.(Canceled)

14. (Currently Amended) The isolated polynucleotide of claim ~~[[13]]~~9, wherein ~~said~~the first promoter region comprises an HSV LAP1 promoter that consists essentially of a sequence region of from about nucleotide 117,938 to about 118,843 of ~~said HSV LAP1 promoter~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111.

15. (Currently Amended) The isolated polynucleotide of claim 14, wherein ~~said~~the first promoter region comprises an HSV LAP1 promoter that consists of a sequence region of from about nucleotide 117,938 to about 118,843 of ~~said HSV LAP1 promoter~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111.

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16-26.(Canceled)

27. (Currently Amended) The isolated polynucleotide of claim 1, further comprising at least a first multiple cloning region operably positioned downstream of ~~said~~the first LAT insulator/boundary region and upstream of ~~said~~the LAT enhancer element.

28. (Currently Amended) The isolated polynucleotide of claim 27, wherein ~~said~~the first multiple cloning region further comprises a nucleic acid sequence that encodes a promoter or an enhancer sequence that is expressed in a mammalian host cell.

29. (Currently Amended) The isolated polynucleotide of claim 27, further comprising at least a second multiple cloning region operably positioned upstream of ~~said~~the second LAT insulator/boundary region and downstream of ~~said~~the LAT enhancer element.

30. (Currently Amended) The isolated polynucleotide of claim 29, wherein ~~said~~the second multiple cloning region further comprises at least a first nucleic acid sequence that encodes a therapeutic agent.

31. (Currently Amended) The isolated polynucleotide of claim 30, wherein ~~said~~the second multiple cloning region further comprises a nucleic acid sequence that encodes at least a first therapeutic agent selected from the group consisting of a peptide, a polypeptide, a ribozyme, a catalytic RNA molecule, an antisense oligonucleotide, and an antisense polynucleotide.

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32-45. (Canceled)

46. (Previously Presented) A viral vector, virion, or plurality of viral particles that comprises the isolated polynucleotide of claim 1 or claim 73.

47. (Currently Amended) The viral vector, virion, or plurality of viral particles of claim 46, wherein ~~said~~the vector, virion, or plurality of viral particles is of retroviral, adenoviral, adeno-associated viral, or ~~a~~ herpes viral origin.

48. (Previously Presented) The viral vector, virion, or plurality of viral particles of claim 47, comprising a gutless HSV vector, a gutless AV vector, a gutless AAV vector, a recombinant HSV vector, a recombinant AV vector, or a recombinant AAV vector.

49-50. (Canceled)

51. (Currently Amended) An isolated mammalian host cell that comprises:

- (a) the isolated polynucleotide of claim 1 or claim 73; or
- (b) ~~the~~a viral vector, virion, or plurality of viral particles that comprises the isolated polynucleotide of claim 461 or claim 73.

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52-53. (Canceled)

54. (Currently Amended) A pharmaceutical composition comprising:

(a) the isolated polynucleotide of claim 1 or claim 73[[,]]; or

(b) thea viral vector, virion, or plurality of viral particles that comprises the isolated polynucleotide of claim 1 or claim 73~~of claim 46.~~

55-71. (Canceled)

72. (Currently Amended) A recombinant viral vector comprising ~~an~~the isolated polynucleotide that comprises:

(a) ~~an isolated HSV LAT enhancer element, that comprises a contiguous nucleotide sequence from about nucleotide 118,975 to about nucleotide 120,471 of an HSV LAT 5;~~

(b) ~~a first isolated LAT insulator/boundary region, that comprises a contiguous nucleotide sequence from about nucleotide 8365 to about nucleotide 9273 of HSV1, operably positioned upstream of said isolated LAT enhancer element;~~  
and

(c) ~~a second isolated LAT insulatory/boundary region, that comprises a contiguous nucleotide sequence from about nucleotide 120,208 to about~~

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~~nucleotide 120,940 of HSV1, operably positioned downstream of said  
isolated LAT enhancer element of claim 1.~~

73. (Currently Amended) An isolated polynucleotide that comprises:

- (a) an ~~isolated~~ HSV LAT enhancer element, consisting ~~essentially~~ of a contiguous nucleotide sequence from about nucleotide 118,975 to about nucleotide 120,471 of ~~an HSV LAT 5-exon~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111;
- (b) a first ~~isolated~~ LAT insulator/boundary region, consisting ~~essentially~~ of a contiguous nucleotide sequence from about nucleotide 8365 to about nucleotide 9273 of ~~HSV1~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111, operably positioned upstream of ~~said~~the isolated LAT enhancer element; and
- (c) a second ~~isolated~~ LAT insulatory/boundary region, consisting ~~essentially~~ of a contiguous nucleotide sequence from about nucleotide 120,208 to about nucleotide 120,940 of ~~HSV1~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111, operably positioned downstream of ~~said~~the isolated LAT enhancer element.

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74. (Currently Amended) The isolated polynucleotide of claim 73, further comprising a first promoter region operably positioned upstream of ~~said~~the LAT enhancer element, and downstream of ~~said~~the first LAT insulator/boundary region.
75. (Currently Amended) The isolated polynucleotide of claim 74, wherein ~~said~~the first promoter region consists ~~essentially~~ of a sequence region of from about nucleotide 117,938 to about 118,843 of an ~~HSV-LAP1 promoter~~any one of SEQ ID NO:109, SEQ ID NO:110, and SEQ ID NO:111.